

REMARKS

By the present amendment, claims 1-5 have been amended to obviate the examiner's objections thereto and/or to further clarify the concepts of the present invention. More particularly, the noted claims have been amended to recite that the wafer used in the subject methods is a semiconductor wafer.

It is submitted that these amendments to the claims are helpful in distinguishing the subject claims over the cited prior art and do not raise new issues which would require further consideration and/or search. In addition, it is submitted that such amendments place the application in better form for appeal by materially reducing or simplifying the issues for appeal. Furthermore, no additional claims are presented without cancelling a corresponding number of finally rejected claims. In view of the above, it is submitted that entry of the above amendments is in order and such is respectfully requested.

In the Office Action, independent claims 1 and 2 again were rejected under 35 U.S.C. §103(a) as being unpatentable over the patent to Morgan et al in view of the patents to Glenn et al and Corbett. In addition, independent claim 4 was again rejected under 35 U.S.C. §103(a) as being unpatentable over the patents to Glenn et al and Corbett and dependent claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over the patents to Morgan et al, Glenn et al and Corbett.

In making the initial rejection, it was asserted that the cited Morgan et al patent teaches the method of manufacturing a wafer level semiconductor device as claimed except for (1) the first and second markings being at the rear surface of the wafer and for (2) sealing the front surface of the wafer with a resin material. The patent to Corbett was then asserted to supply the teaching deficiency with respect to the former (1) and the patent to Glenn et al was asserted to supply the teaching deficiency with respect to the latter (2). Reconsideration of these rejections in view of the following comments is respectfully requested.

It is submitted that the patents to Morgan et al, Glenn et al and Corbett, whether taken singly or in combination, do not teach or suggest the subject matter defined by claims 1, 2, 4 and 5 as amended herein. More particularly with respect to independent claims 1 and 2, it is submitted that the Glenn et al patent, among other things, does not supply the noted teaching deficiency of the Morgan et al patent. With respect to claim 4, it is submitted that the Glenn et al patent does not teach that which was asserted in the Action.

Among other things, it was asserted that the Glenn et al patent teaches sealing the front surface of a wafer with a resin material. It is submitted that such an assertion is not accurate. The "wafer" as allegedly taught by the Glenn et al patent is not a semiconductor wafer, but rather is an interposer substrate on which a plurality of semiconductor chips are

mounted. The patent to Glenn et al does not disclose sealing a front surface of a semiconductor wafer, but rather discloses sealing a substrate 13 as is specifically shown in Fig. 3A thereof. As is defined on lines 55-64 of column 2 of the Glenn et al patent, the substrate 12 is not a semiconductor wafer, but rather is a ceramic or a passivated metal substrate. (The Glenn et al patent apparently erroneously used both the numerals 12 and 13 in describing the substrate and in using numeral 12 to also describe the section of the substrate).

Independent claims 1 and 2 have been amended herein to clarify this important distinction by specifically reciting that the "wafer" is a "semiconductor wafer." It is therefore submitted that the Glenn et al patent does not supply the noted teaching deficiency of the Morgan et al patent. It further is submitted that the Glenn et al patent is not in the same field of endeavor as the Morgan et al patent as was asserted in the Action and therefore one of ordinary skill in the art would not be led to combine their respective teachings.

It is further submitted that the Corbett patent, among other things, also does not supply the noted teaching deficiency of the Morgan et al and Glenn et al patents with respect to the above. Therefore, it is submitted that one of ordinary skill in the art also would not achieve the presently claimed invention from the respective teachings of the Morgan et al, Glenn et al and the Corbett patents.

Regarding the subject matter of claims 4 and 5, it was asserted that the Glenn et al patent teaches sealing the front surface of a substrate with encapsulant layer 42 and this substrate is consistent with applicant's wafer. As above, it is to be noted that the "wafer" as allegedly taught by the Glenn et al patent is not a semiconductor wafer, but rather is an interposer substrate on which a plurality of semiconductor chips are mounted. The patent to Glenn et al does not disclose sealing a front surface of a semiconductor wafer, but rather discloses sealing a substrate 13 as is specifically shown in Fig. 3A thereof. Further, as is disclosed on lines 55-64 of column 2 of the Glenn et al patent, this substrate is not a semiconductor wafer.

Claims 4 and 5 also have been amended herein to clarify this important distinction by specifically reciting that the "wafer" is a "semiconductor wafer." It is therefore submitted that the Glenn et al patent does not teach that which is being claimed and further that the Corbett patent does not supply these teaching deficiencies with respect to the features noted above.

For the reasons stated above, withdrawal of the rejections under 35 U.S.C. §103(a) and allowance of claims 1, 2, 4 and 5 over the cited patents are respectfully requested.

Further, dependent claim 3 was rejected under 35 U.S.C. §103(a) as being unpatentable over the same patents to Morgan et al, Glenn et al and Corbett as applied in the previous rejection in view of the patent to Ohgiyama. Reconsideration of this rejection in view of the following comments is respectfully requested.

The above remarks relative to the collective teaching deficiencies of the patents to Morgan et al, Glenn et al and Corbett are reiterated with regard to this rejection. It is submitted that the cited patent to Ohgiyama does not supply these teaching deficiencies with respect to independent claims 1 and 2 and thus does not render obvious the subject matter of dependent claim 3.


For the reasons stated above, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of claim 3 over the cited patents are respectfully requested.

In view of the foregoing, it is submitted that the subject application is now in condition for allowance and early notice to that effect is earnestly solicited.

In the event this paper is not timely filed, the undersigned hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 01-2340, along with any other additional fees which may be required with respect to this paper.

Respectfully submitted,

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